

6LU8

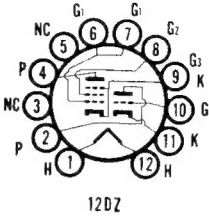
16LU8, 21LU8

Color Television Type

VERTICAL DEFLECTION  
OSCILLATOR and AMPLIFIER

High Mu Triode and  
Beam Power Pentode

Construction ..... Compactron T-12  
Base ..... Button 12 Pin, E12-74  
Basing ..... 12DZ  
Outline ..... 12-57  
Maximum Diameter ..... 1.562 In.  
Maximum Seated Height ..... 2.750 In.  
Maximum Overall Height ..... 3.125 In.



ELECTRICAL DATA

HEATER OPERATION

|   | 21LU8 | 16LU8 | 6LU8      |
|---|-------|-------|-----------|
| Heater Voltage.....                     | 21    | 15.8  | 6.3 Volts |
| Heater Current .....                    | 450   | 600   | 1500 Ma   |
| Heater Warm-up Time .....               | 11    | 11    | — Seconds |
| Maximum Heater-Cathode Voltage          |       |       |           |
| Heater Negative with Respect to Cathode |       |       |           |
| Total DC and Peak.....                  |       |       | 200 Volts |
| Heater Positive with Respect to Cathode |       |       |           |
| DC .....                                |       |       | 100 Volts |
| Total DC and Peak.....                  |       |       | 200 Volts |

DIRECT INTERELECTRODE CAPACITANCES (Unshielded)

Triode Section

|                               |        |
|-------------------------------|--------|
| Grid to Plate: tg to tp ..... | 6.0 Pf |
| Input: tg to (h + Tk) .....   | 7.0 Pf |
| Output: tp to (h + Tk) .....  | 2.0 Pf |

Pentode Section

|                                      |        |
|--------------------------------------|--------|
| Grid No. 1 to Plate: pg1 to pp ..... | 0.5 Pf |
| Input: pg1 to (h + Pk + Pg2) .....   | 16 Pf  |
| Output: pp to (h + Pk + Pg2) .....   | 9.0 Pf |

Coupling

|   |         |
|---|---------|
| Pentode Grid No. 1 to Triode Plate (Max.) ..... | 0.13 Pf |
| Pentode Plate to Triode Plate (Max.) .....      | 0.40 Pf |

RATINGS (Design Maximum Rating System)

Vertical Deflection Oscillator and Amplifier<sup>(1)</sup>

|  | Triode<br>Osc. | Pentode<br>Amp. |
|--|----------------|-----------------|
| Plate Voltage (Max.) .....                     | 400            | 400 Volts       |
| Grid No. 2 Voltage (Max.) .....                | —              | 300 Volts       |
| Peak Positive Pulse Plate Voltage (Max.) ..... | —              | 2500 Volts      |
| Peak Negative Grid No. 1 Voltage (Max.) .....  | 400            | 250 Volts       |
| Plate Dissipation (Max.) <sup>(2)</sup> .....  | 2.5            | 14 Watts        |
| Grid No. 2 Dissipation (Max.) .....            | —              | 2.75 Watts      |
| Average Cathode Current (Max.).....            | 30             | 75 Ma           |
| Peak Cathode Current (Max.) .....              | 105            | 260 Ma          |
| Grid Circuit Resistance                        |                |                 |
| Self Bias (Max.) .....                         | 2.2            | 2.2 Megohms     |
| Fixed Bias (Max.) .....                        | —              | 1.0 Megohm      |
| Bulb Temperature (Max.) .....                  | —              | 210 °C          |

CHARACTERISTICS AND TYPICAL OPERATION

|                                  | Triode<br>Section | Pentode<br>Section |
|----------------------------------|-------------------|--------------------|
| Plate Voltage .....              | 250               | 135 Volts          |
| Grid No. 2 Voltage .....         | —                 | 120 Volts          |
| Grid No. 1 Voltage .....         | —4                | —10 Volts          |
| Plate Current .....              | 2.3               | 56 Ma              |
| Grid No. 2 Current .....         | —                 | 3 Ma               |
| Transconductance .....           | 3600              | 9300 $\mu$ mhos    |
| Amplification Factor .....       | 58                | 6.5 <sup>(3)</sup> |
| Plate Resistance (Approx.) ..... | 16,000            | 12,000 Ohms        |
| Ec for Ib = 10 $\mu$ a .....     | —6.6              | — Volts            |
| Ec for Ib = 1 Ma (Approx.) ..... | —                 | —26 Volts          |
| Ec for Ib = 100 $\mu$ a .....    | —                 | —30 Volts          |

INSTANTANEOUS PLATE KNEE VALUES

Eb = 45 V; Ec2 = 125 V; and Ec = 0 V  
Ib = 200 Ma, and Ic2 = 20 Ma